

Application No. 10/441,088  
Amendment "C" and Response dated March 10, 2006  
Reply to Office Action mailed November 10, 2005

## **REMARKS/ARGUMENTS**

### **Introduction**

The present Amendment is in response to the Examiner's Office Action mailed November 10, 2005. By this paper, claims 1, 93, and 98 are amended. Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Examiner carefully review any references discussed below to ensure that Applicants understanding and discussion of the references, if any, is consistent with the Examiner's understanding. Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

### **Election/Restrictions**

Applicant notes that an election without traverse was made in the reply filed on August 12, 2005. If any claims are generic and are found allowable, Applicant will be permitted to rejoin the withdrawn claims.

### **Claim Objections**

The Office Action objected to claims 58, 60, 62, 64, 73, 82, and 83 as depending from non-elected claims. Applicant has reviewed these claims and notes that claim 58 depends from claim 1, which was an elected claim. Each of claims 60, 62, 64, 73, 82, and 83 similarly depend from an elected claim. Applicant respectfully requests clarification to more fully identify the dependencies that are deemed improper.

### **Rejection Under 35 U.S.C. § 103**

The Examiner rejected claims 1-15, 25, 87, 91-95, 97-78, and 101 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,799,005 (*Fernandes*). Applicants

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respectfully traverse the Examiner's rejection for obviousness at least on the grounds that the reference fails to teach or suggest each and every element of the rejected claims.

Embodiments of the invention are directed to devices that are attachable to high voltage transmission lines and that power themselves by generating a comparatively lower voltage from the current flowing between the high voltage line and the body capacitance of an element of the device.

As noted in the background of the specification, there exist some devices that power themselves using the magnetic field generated by the current flowing through the line they are monitoring. *See* ¶[0011]. However, these devices may not be usable over a wide dynamic range due to the fact that the magnetic field generated at low current may not be adequate to generate enough power. *See Id.*

This is the case in *Fernandes*, which clearly teaches that each "module normally obtains its operating power from the magnetic field generated by current flowing in the associated conductor." *See* col. 3, lines 58-61. When line current is not present or is below a predetermined value, *Fernandes* preferably teaches a backup power means to provide necessary operating power. *See* col. 3, lines 60-65. This is clearly evident in Figure 7 of *Fernandes* which illustrates that the power supply receives electrical power from pick-off coils 88 and 90 when sufficient current is flowing through conductor 12, and otherwise from batteries 116. *See* col. 7, lines 40-43.

Claim 1 requires that a first input terminal of the power supply be coupled to a conductive body and that a second input terminal of the power supply is operative to be coupled to said power line. The Office Action suggests, citing to Figure 7, that a power supply comprising at least two input terminals, one connected to a conductive body and a second operative to be coupled to the power line is taught by *Fernandes*. Applicant respectfully disagrees.

The inputs illustrated in Figure 7 of *Fernandes* are not, as required by claim 1, connected to both the conductive body and to the power line. In particular, the power line or conductor 12 is clearly not connected to these inputs or to the coils 88 and 90. According to *Fernandes*, as indicated above, the power supply is using the magnetic field generated by the current flowing in the conductor 12. Further, Figure 7 illustrates that the pick-up coils surround an iron core 86,

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which is mounted "in the rear section of module 10, surrounding conductor 12 to provide means for obtaining the power necessary for operation of the electronics of the module from conductor 12 when sufficient current is flowing therethrough." See col. 6, lines 43-48. Thus, the iron core 86 surrounds the conductor 12 and it is evident that the pick up coils 88 and 90 are not connected with the conductor 12 but are around the iron core 86, which in turn surrounds the conductor 12. Thus, the power supply required by claim 1 is not taught or suggested by *Fernandes*.

Further, claim 1 requires a current to flow between the power line and the conductive body through the power supply. In claim 1, the current is converted into a supply of power at a voltage substantially lower than said high AC line voltage. Using the current as required by claim 1 provides certain advantages not present in the cited art. For example, embodiments of the invention can function in cases of low current whereas the device taught by *Fernandes* requires a backup power means as discussed above. In other words, *Fernandes* derives power from the magnetic field generated by current flowing in the conductor while embodiments of the invention can derive power from the voltage of power line and the resulting current. The current of *Fernandes* flows in the conductor, but it does not flow between the conductive body and the power line as required by claim 1.

For at least these reasons, claim 1 is not taught or suggested by the art of record. Allowance is respectfully requested. The dependent claims 2-25, 25, 87, 91-92, 97, and 101 depend from claim 1 and overcome the art for at least the same reasons.

Claim 93 has been similarly amended and reflects that the current flow occurs between the power line and the conductive portion of the apparatus. Claim 93 further indicates that the current is a result of a body capacitance of the apparatus and a voltage of the power line. As discussed previously, the power taught by *Fernandes* is derived from the magnetic field generated by current in the power line, whereas claim 93 mounts the apparatus such that a current flow occurs between said power line and a conductive portion. No such current is taught or suggested by *Fernandes*.

For at least these reasons, claim 93 is not taught or suggested by the art of record and is in condition for allowance, which is respectfully requested. Claims 94 and 95 depend from claim 93 and overcome the cited art for at least the same reasons.

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Claim 98 has been amended to require that the current flow result from the body capacitance of the conductive body and a voltage of the power line. As discussed above, *Fernandes* derives power from a magnetic field and does not teach or suggest the current flow required by claim 98, which flows between said power line and said conductive body.

For at least the reasons discussed herein, claim 98 also overcomes the cited art and is in condition for allowance. The dependent claim 99 overcomes the art for at least the same reasons.

#### **Allowable Subject Matter**

The Examiner has indicated that claims 16-24 and 26-43, 59, 63, 65, 67-72, 74-76, 80, 84-86, 99, and 100 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants thank the Examiner for the careful review of these claims. Because the independent claims are in condition for allowance as discussed herein, Applicant declines to rewrite these claims in independent form at this time. While Applicant agrees that these claim are allowable, Applicant submits that it is the claim as a whole, rather than any particular limitation, that makes each of the claims allowable. No single limitation should be construed as the reason for allowance of a claim because it is each of the elements of the claim that makes it allowable. Therefore, Applicant does not concede that the reasons for allowable subject matter given by the Examiner are the only reasons that make, or would make, the claims allowable.

#### **Conclusion**

In view of the foregoing, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

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Dated this 10<sup>th</sup> day of March 2006.

Respectfully submitted,



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